

### REMARKS

Claims 1-33 remain for consideration and are thought to be allowable over the cited art. Applicants appreciate the allowance of Claims 6 and 21 if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-5, 9, 12-20, 24, and 29 are amended to correct typographical errors related to claim objections and not for purposes of patentability. Claims 1-5, 9, 12-20, 24, and 29 as originally filed are thought to have been reasonably clear to those skilled in the art. However, these claims are amended for purposes of expediting prosecution.

For Claims 1, 9, 12 15, 24, and 29, "the routing resources" was amended to "routing resources" to correct antecedent basis instead of Examiner's suggested modification to "the target routing resource." In dependent claims 3 and 19, "the target routing resource" is clarified as being included in the "routing resources" of parent Claims 1 and 15.

Claim 5 was also amended to correct antecedent basis in a different manner than suggest by the Examiner. The term "identified" is removed from Claim 5 because the claim is thought to be clearer without the term.

For Claim 5 ("wherein"), Claim 9 ("code"), and Claim 24 ("code"), Applicants traverse the objection because one of ordinary skill in the art would understand the claimed invention following a review of the specification.

Applicants also traverse the objection to Claim 6 because the "routing resources" are not necessarily limited to "the target routing resources" as one of ordinary skill in the art would understand following a review of the specification.

The Office Action does not establish that Claims 1-5, 7-20, and 22-33 are unpatentable under 35 USC §103(a) over "AAPA" (Applicants' Admitted Prior Art, specification paragraph [0002] - [0011]; Fig. 1, Fig. 2) in view of "Kolze" (U.S. Patent No. 6,130,554 to Kolze et al). Applicants assume the citation of Kolze in the Notice of References Cited is the intended citation by the Examiner and the citation of another reference (U.S. Patent No. 6,130,550) in the Office Action is a typographical error. The rejection is respectfully traversed because the Office Action fails to show that all

the limitations are suggested by the references, fails to provide a proper motivation for modifying the teachings of Applicant's Admitted Prior Art with teachings of Kolze, and fails to show that the combination could be made with a reasonable likelihood of success.

The independent Claims 1, 9, 12, 15, 24, and 29, each include, for example, the limitations of "setting the target routing resource as a router starting point" and the Office Action fails to identify the teachings of the references that correspond to these limitations. Furthermore, AAPA teaches away from setting the target routing resource as the router starting point because AAPA teaches "[k]nown routing software is not designed to route through specific routing resources" (paragraph [0008]). If the rejection is maintained, Applicants request that Examiner particularly point out the correspondence between each limitation of the claims and the cited prior art.

The proposed modification of AAPA with the teachings of Kolze would render AAPA unusable for its intended purpose. Thus, the motivation to combine the AAPA with the teaching of Kolze is improper. AAPA teaches testing routing resources (e.g. interconnect lines, PIPs, routing multipliers, and so forth) in a PLD using a set of test designs (paragraphs [0007] and [0009]). Thus, the PLD may implement multiple test designs, suggesting the PLD is reprogrammable to successively implement each of the test designs. In contrast, Kolze teaches a programmable integrated circuit having antifuses that are programmed to form a permanent, low-impedance connection (col. 3, line 66 to col. 4, line 3). The programmable integrated circuit of Kolze may implement only one test design because the programmable integrated circuit of Kolze can be programmed only once. Because one test design is insufficient for complete testing of the routing resources, thoroughly testing every routing resource of the PLD (paragraph [0007]) cannot be achieved by modifying AAPA with Kolze. Therefore, the alleged motivation is improper.

In addition, it appears unlikely that AAPA-Kolze combination could be made with a reasonable likelihood of success. A programmable integrated circuit combining the teachings of AAPA and Kolze could not be reprogrammed to implement a function that is selected by a user after programming the programmable integrated circuit with a single test design. Implementing the test design with the combined teachings would

effectively turn the programmable integrated circuit into a non-programmable integrated circuit.

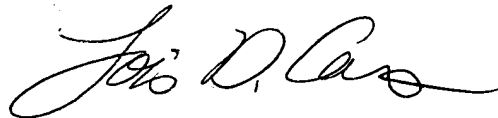
Claims 2-5, 7-8, 10-11, 13-14, 16-23, 25-28, and 30-33 are dependent claims of independent Claims 1, 9, 12, 15, 24, and 29. These dependent claims include all of the limitations of the base claims and any intervening claims and recite additional features, which further distinguish these claims from the cited references. Thus, the Office Action does not show that these claims are unpatentable.

The rejection of Claims 1-5, 7-20, and 22-33 should be withdrawn because the Office Action fails to establish a *prima facie* case of obviousness.

### CONCLUSION

Reconsideration and a notice of allowance are respectfully requested in view of the Amendments and Remarks presented above. If the Examiner has any questions or concerns, a telephone call to the undersigned is invited.

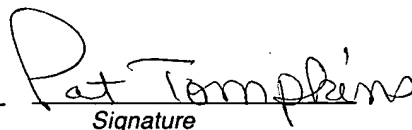
Respectfully submitted,



Lois D. Cartier  
Agent for Applicants  
Reg. No. 40,941

*I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on December 13, 2005.*

Pat Tompkins  
Name

  
Signature